

FOUR TRANSISTORS (FTX-3A) MODULE P/N 841533

36/433

# **Functional Description**

IBM PRODUCTS

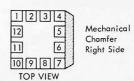
The Four Transistor, FTX-3A, module consists of four single transistors with the individual base, emitter and collector leads terminated at specific pins. The individual transistors offer the circuit designer uniformity of circuit packaging as well as flexibility in application with other SLT modules. The FTX-3A is the fastest of the three medium speed transistor modules.

#### Schematic





### **Terminal Configuration**



# Maximum Ratings

I<sub>E</sub> = 50 Milliamps

FTX-3A Test Conditions

	INDIVIDUAL DEVICE PARAMETER	RTEST	S		
TESTS	test conditions	T ° C	LIMITS		
			MIN	MAX	UNITS
BVCEO	I <sub>C</sub> = 5ma, I <sub>B</sub> = 0	25	8		٧
BV <sub>CBO</sub>	Ι <sub>C</sub> = 10 μα	25	12		٧
BVEBO	I <sub>E</sub> = 10 μα	25	2.5		٧
<sup>1</sup> CEX	V <sub>CE</sub> = 5V, V <sub>BE</sub> = .35V	75		100	μα
IBEX	V <sub>CE</sub> = 9V, V <sub>BE</sub> = -3V	75		10	μα
H <sub>FE</sub>	I <sub>E</sub> = 10.0ma, V <sub>CB</sub> = 0V	25	25		
H <sub>FE</sub>	I <sub>E</sub> = 30.0ma, V <sub>CB</sub> = 0V	25	22		
τ <sub>S</sub>	See Fig. 1	25		35	ns
/GAIN/	$f = 100 \text{mhz}, I_E = 10 \text{ma}, V_{CB} = +3.0 \text{V}$	25	1.5		
C <sub>ib</sub>	V <sub>EB</sub> = 0.0V, f = 1 ± .5 mhz	25		6.5	pf
Cop	V <sub>CB</sub> = 0.0V, f = 1 + .5 mhz	25		6.5	pf
V <sub>CE</sub>	1 <sub>C</sub> = 1.0ma, 1 <sub>B</sub> = .05ma	25		.30	٧
V <sub>CE</sub>	I <sub>C</sub> = 10.0ma, I <sub>B</sub> = .5ma	25		.30	٧
V <sub>CE</sub>	I <sub>C</sub> = 50.0ma, I <sub>B</sub> = 2.5ma	25		.50	٧
V <sub>BE</sub>	I <sub>C</sub> = 1.0ma, I <sub>B</sub> = .05ma	25	.60	.75	٧
- <sup>∨</sup> BE	I <sub>C</sub> = 10.0ma, I <sub>B</sub> = .5ma	25	.70	.85	٧
∨ <sub>BE</sub>	I <sub>C</sub> = 50.0ma, I <sub>B</sub> = 2.5ma	25	.80	1.10	٧
β <sub>R</sub>	V <sub>EC</sub> = 1.5V, I <sub>B</sub> = 2.3ma	75		1.0	

## τ<sub>s</sub> Test Circuit

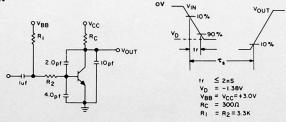


FIGURE 1